

What is claimed is: ✓

sub
A₁

1. A monolithic video signal processing circuit comprising within a single substrate:

means for accepting a video signal;

means for detecting the amplitude of accepted signals and for amplifying said accepted signals to a specific level; and

means for accepting said specific level amplified video signals and for processing said amplified signals to reduce all but the IF frequencies present in said video signals while amplifying said IF frequencies to a certain fixed value for presentation to an output of said circuit.

2. The invention set forth in claim 1 further comprising:

means connected between said output of said circuit and said processing means for accepting said presented signals and for amplifying said accepted signals a fixed amount.

3. The invention set forth in claim 2 wherein said amplification by said last-mentioned means is low with respect to said amplification by said detecting and amplifying means.

sub
A₂

4. The invention set forth in claim 1 wherein said detecting and amplification means is a VGA.

5. The invention set forth in claim 1 wherein said accepting means includes:

means for removing therefrom certain unwanted frequencies.

6. The invention set forth in claim 1 wherein said specific level for said amplification is the maximum level acceptable as an input to said processing means to avoid distortion of said video signal.

sub
A₃

7. The method of processing a video signal comprising the steps
of:

presenting said video signal to the input of a monolithic circuit;
detecting the amplitude of presented signals and amplifying said
presented signals to a specific level;

accepting said specific level amplified video signals and further
processing said amplified signals to reduce all but the IF frequencies
present in said video signals while amplifying said IF frequencies to a
certain fixed value for presentation to an output of said monolithic
circuit.

8. The method set forth in claim 1 further comprising the step
of:

accepting said presented signals before presentation to said
output of said monolithic circuit and amplifying said accepted signals a
fixed amount, and

presenting said fixed amount amplified signal to said output of
said monolithic circuit.

9. The method set forth in claim 8 wherein said last-
mentioned amplification is low with respect to the amplification of the
detection and amplification step.

sub
A₄

10. ~~The method set forth in claim 7 wherein the amplification
of the amplification and detection step is accomplished by a VGA~~

11. The method set forth in claim 7 further including the step
of:

ahead of said detection and amplification step removing from the
presented video signal certain unwanted frequencies.

12. The method set forth in claim 7 wherein said specific level for said amplification is the maximum level acceptable as an input to said further processing step to avoid distortion of said video signal.

sub
A5

13. A system for processing RF signals in a monolithic circuit,
comprising:

5 an input to said circuit for receiving on RF signal;
a mixer having one input and one output, said input of
said mixer means connected to said input;
a first filter having one input and one output, said input of
said first filter connected to said output of said mixer;
a first amplifier having one input and one output, said
10 input of said amplifier connected to said output of said first
filter;
a second filter having one input and one output, said input
of said second filter connected to said output of said first
amplifier; and
a second amplifier having one input and one output, said
15 input of said second amplifier connected to said output of said
second filter, and said output connected to an output of said
circuit.

14. The system as claimed in claim 13, wherein said first filter
is a low-pass filter.

sub
A6

~~15. The system as claimed in claim 13, wherein said first
amplifier means is a VGA.~~

16. The system as claimed in claim 13, wherein said second
filter means is an intermediate frequency, band-pass filter.

sub
A7

~~17. The system as claimed in claim 13, wherein said second
amplifier means is an FGA.~~

sub
A7

18. A method of processing RF signals, the method comprising the steps of:

receiving an input RF signal;
mixing said input RF signal with an operating frequency
signal to generate a first signal;
filtering said first signal to generate a second signal;
amplifying to a fixed level said second signal to generate a
third signal;
filtering said third signal to generate a fourth signal; and
amplifying said fourth signal a fixed amount to generate a
fifth signal.

19. A method for processing RF signals as recited in claim 18, wherein said step of filtering said first signal to generate said second signal includes processing said first signal through a low-pass filter; and wherein said step of amplifying said second signal to generate a third signal includes amplifying said second signal by a variable gain amplifier (VGA), the limit of said VGA being the maximum level acceptable by said third signal filtering step without distortion.

20. A method for processing RF signals as recited in claim 19, wherein the step of filtering said third signal to generate a fourth signal includes processing said third signal through an intermediate-frequency, band-pass filter.

sub
A8

21. A method of processing RF signals as recited in claim 20, wherein said step of amplifying said fourth signal to generate a fifth signal includes amplifying said fourth signal by an FGA.